



# RIVER MURRAY WEEKLY REPORT

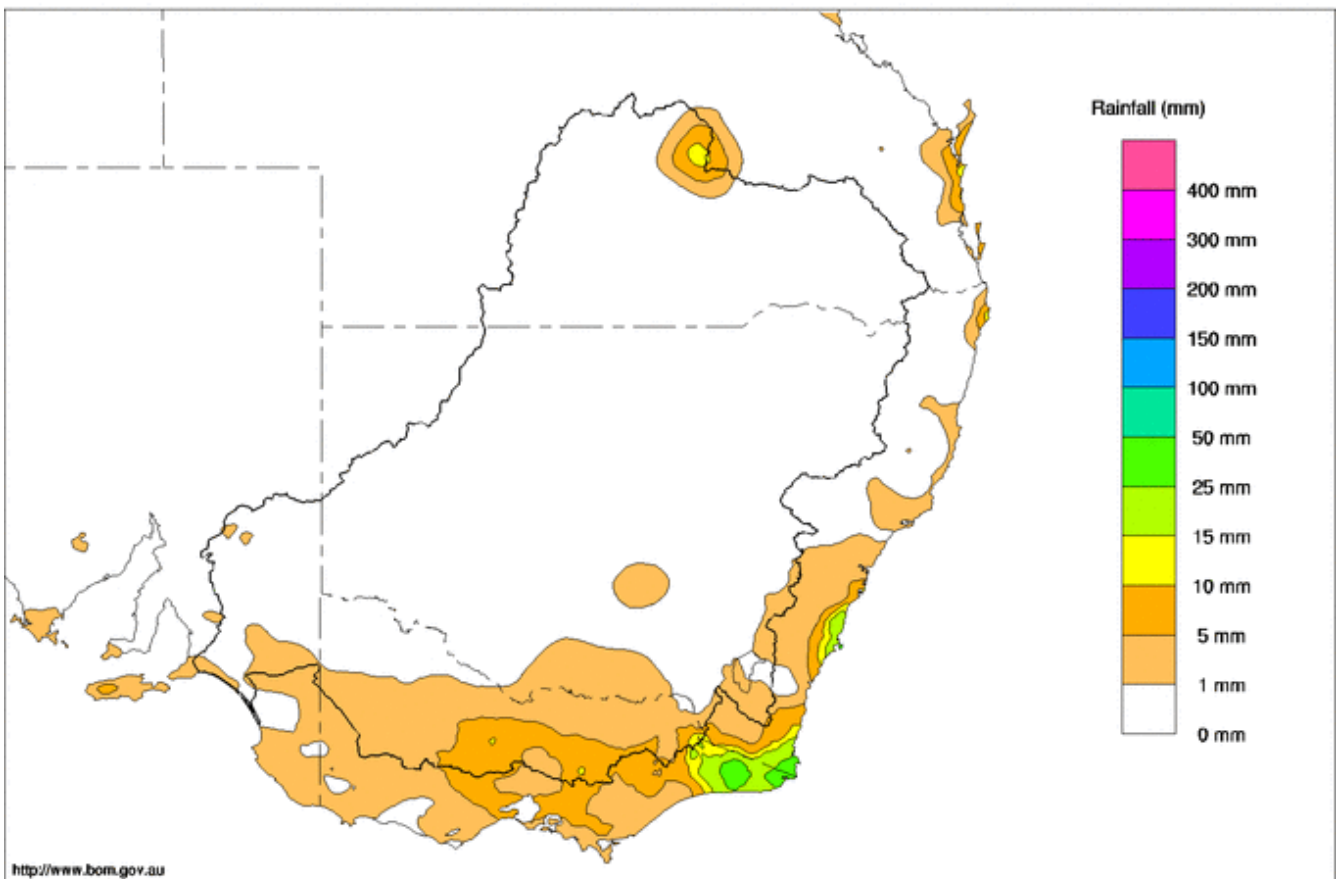
FOR THE WEEK ENDING WEDNESDAY, 15<sup>TH</sup> APRIL 2015

Trim Ref: D15/15111

## Rainfall and Inflows

Consecutive slow-moving high pressure systems brought stable weather to the Murray-Darling Basin this week, with little to no rainfall recorded across most areas. The most significant rain totals fell around Carnarvon National Park in Queensland and the Victorian Alps, including 10 mm at Lake Eildon.

Murray-Darling Rainfall Totals (mm) Week Ending 15th April 2015  
Australian Bureau of Meteorology



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Map 1 - Murray Darling Basin rainfall week ending 15th April 2015 (Source: Bureau of Meteorology) Issued: 15/04/2015

Stream flows in the upper catchments receded this week, following small responses to rain the previous week. Upstream of Dartmouth, the Mitta Mitta at Hinnomunjie reduced from 430 to 160 ML/day. On the Upper Murray, the flow at Biggara fell from 430 to 240 ML/d; and on the Ovens River, the flow at Wangaratta decreased from 300 to 200 ML/day.

## River Operations

- Yarrawonga Weir pool to be lowered as early as next week
- Lake Victoria increases in storage volume

### The Role of Weather Forecasts

Weather has a major influence on river operations. This can be quite evident after significant rainfall events or hot spells but when managing the River Murray, MDBA considers a wide range of forecasts



over short, intermediate to long term time periods. Below are some examples of the current Bureau of Meteorology (BoM) outlooks and how MDBA is factoring these into our operations.

In the short term, BoM is forecasting 25 to 50 mm of rain across much of the Murray system over Friday and Saturday. MDBA watched this forecast develop earlier in the week and judged that it was highly likely the rain would suppress water demands and losses across the system and therefore began reducing releases from Hume Dam on Tuesday.

BoM's three month outlook for April to June shows that it is likely to be wetter than normal over most of the Australian mainland, due to warmer than normal sea surface temperatures in the Indian Ocean and the waters surrounding much of the Australian coastline. However despite this rainfall outlook, and as the upper Murray catchments are very dry, BoM's streamflow outlook for the same period shows a strong bias that lower inflows will persist at Hume Dam. This information has been important in MDBA's decisions in recent weeks around bulk transfers from Dartmouth to Hume.

BoM has updated its longer-term outlooks showing that the chance of El Niño occurring in 2015 has increased to at least 70%. Ocean temperatures in the tropical Pacific continue to be warmer than average, trade winds remain weaker than average, and all models surveyed suggest further ocean warming will occur. An El Niño is no guarantee of drought but would increase the likelihood of lower system inflows in 2015-16. Therefore MDBA, along with consumptive and environmental entitlement holders, will be factoring this into our collective plans for the coming season. One tangible outcome for the River Murray system will be an increased likelihood of large volumes of water needing to be transferred from Dartmouth to Hume next season and a reduced likelihood of significant flows in the Darling River.

An important point to remember with all these forecasts and outlooks is the uncertainty associated with them. Whilst current catchment and climate conditions might point to an increased *chance* of drier conditions in coming months it is still very possible to have significant rain and streamflow events and MDBA will therefore continually review operations as the season develops.

#### *Current Operations*

MDBA total storage fell by 66 GL this week, with the active storage now 3,524 GL (42% capacity).

At **Dartmouth** Reservoir, storage decreased by 39 GL to 2,932 GL (76% capacity). The release, measured at the Colemans gauge, was steady during the week at 6,000 ML/day. Releases will begin reducing this week due to maintenance work on AGL power station assets until flows reach 600 ML/day on 3 May, see attached flow advice. If winter-spring rainfall is suppressed by an El Niño event, bulk transfers from Dartmouth for the 2015-16 water year could begin as early as winter and might persist throughout much of the water year.

At **Hume** Reservoir, the storage volume decreased by 28 GL this week with total storage now at 616 GL (20% capacity). From 1961, when Hume was enlarged to its current size, Hume's median storage volume for end of April is 766 GL while its lowest storage volume was 82 GL in 2009. The release has averaged around 15,000 ML/day at Doctors Point this week. Releases are being reduced due to the current weather outlook.

At **Yarrowonga** Weir, diversions at the major irrigation offtakes Mulwala Canal and Yarrowonga Main Channel averaged 4,100 ML/day and 1,100 ML/day respectively. The MDBA order through Mulwala Canal was reduced this week to manage the weir pool level, in light of the BoM four day outlook. The downstream release from Yarrowonga Weir has been reduced to 9,500 ML/day to assist management of the Yarrowonga weir pool level. This reduction also creates some spare channel capacity on the Murray downstream of Yarrowonga Weir to reduce the risk of flooding of Barmah-Millewa forest from local inflows and rainfall on the river.

Yarrowonga Weir pool level will be lowered this winter for structural works at the weir and to manage the aquatic weed *Egeria densa*, see attached media release. Lowering could begin as early as next week but is dependent on the major irrigation offtakes orders which require gravity diversions.

On the **Edward** River system, the Edward Offtake and Gulpa offtakes continue to pass flows at regulated channel capacity. At **Stevens Weir**, the flow downstream averaged 2,600 ML/day for the week, which is 100 ML/day shy of regulated channel capacity.



On the **Goulburn** River, the flow at McCoys Bridge has remained steady throughout the week averaging 1,000 ML/day. The flow above the minimum of 350 ML/day at this time is environmental water aimed at boosting base flows in the Goulburn River and is expected to continue for much of autumn.

Downstream at **Torrumbarry** Weir, diversions at National Channel averaged 2,100 ML/day this week and may reduce over the coming week due to rainfall. This would increase the Torrumbarry downstream flow which is currently about 6,400 ML/day.

On the lower **Murrumbidgee** River, Inter Valley Transfer (IVT) water continues to be delivered at Balranald with a target of 900 ML/day and the flow on the Murray at **Euston** is currently 9,500 ML/day.

On the **Barwon** River the flow at Mungindi reached 1,870 ML/day last Thursday and further downstream the flow at Collarenebri is currently 3,500 ML/day. At **Menindee Lakes**, the storage decreased by 4 GL and is now at 75 GL (4% capacity). Releases at Weir 32 averaged 250 ML/day this week.

At **Lake Victoria**, the storage volume increased by 4 GL to 170 GL (25% capacity). This is the first weekly increase in storage volume since December 2014. Photo 1, below captures Lake Victoria at almost its lowest point this year. For reference, a photo of Lake Victoria at full capacity is also included, see Photo 2. The flow to **South Australia** is currently targeting 6,400 ML/day and will continue at this rate for the next few days.



Photo 1 - Lake Victoria on 8 April 2015 (source Hugo Bowman) – This photo depicts the large area of Lake Victoria's foreshore that can be colonised by vegetation to assist in conservation of Aboriginal cultural heritage material.



Photo 2 – Lake Victoria at full supply level (source Colin Pardoe)

At the **Lower Lakes**, the 5-day average level in Lake Alexandrina is 0.55 m AHD. Releases through the Barrages have averaged around 2,500 ML/day over the last week.

**For media inquiries contact the Media Officer on 02 6279 0141**

DAVID DREVERMAN  
Executive Director, River Management





**Water in Storage**

**Week ending Wednesday 15 Apr 2015**

MDBA Storages	Full Supply Level	Full Supply Volume (GL)	Current Storage Level	Current Storage		Dead Storage (GL)	Active Storage (GL)	Change in Total Storage for the Week (GL)
	(m AHD)		(m AHD)	(GL)	%			
Dartmouth Reservoir	486.00	3 856	470.71	2 932	76%	71	2 861	-39
Hume Reservoir	192.00	3 005	174.89	616	20%	23	593	-28
Lake Victoria	27.00	677	22.16	170	25%	100	70	+4
Menindee Lakes		1 731*		75	4%	(- -) #	0	-4
<b>Total</b>		<b>9 269</b>		<b>3 793</b>	<b>41%</b>	<b>--</b>	<b>3 524</b>	<b>-66</b>
Total Active MDBA Storage							42% ^	

**Major State Storages**

Burrinjuck Reservoir	1 026	383	37%	3	380	+50
Blowering Reservoir	1 631	440	27%	24	416	-12
Eildon Reservoir	3 334	1 903	57%	100	1 803	-22

\* Menindee surcharge capacity – 2050 GL

\*\* All Data is rounded to nearest GL \*\*

# NSW takes control of Menindee Lakes when storage falls below 480 GL, and control reverts to MDBA when storage next reaches 640 GL

^ % of total active MDBA storage

**Snowy Mountains Scheme**

Snowy diversions for week ending 14 Apr 2015

Storage	Active Storage (GL)	Weekly Change (GL)	Diversion (GL)	This Week	From 1 May 2014
Lake Eucumbene - Total	2 151	n/a	Snowy-Murray	+40	425
Snowy-Murray Component	954	n/a	Tooma-Tumut	+5	220
Target Storage	1 340		Net Diversion	35	205
			Murray 1 Release	+45	703

**Major Diversions from Murray and Lower Darling (GL) \***

New South Wales	This Week	From 1 July 2014	Victoria	This Week	From 1 July 2014
Murray Irrig. Ltd (Net)	16.8	828	Yarrowonga Main Channel (net)	7.7	288
Wakool Sys Allowance	3.7	75	Torrumbarry System + Nyah (net)	10.9	583
Western Murray Irrigation	0.3	23	Sunraysia Pumped Districts	1.1	103
Licensed Pumps	6.3	262	Licensed pumps - GMW (Nyah+u/s)	3.3	64
Lower Darling	0.1	60	Licensed pumps - LMW	2	268
<b>TOTAL</b>	<b>27.2</b>	<b>1248</b>	<b>TOTAL</b>	<b>25</b>	<b>1306</b>

\* Figures derived from estimates and monthly data. Please note that not all data may have been available at the time of creating this report.

\*\* All data above is rounded to nearest 100 ML for weekly data and nearest GL for cumulative data\*\*

**Flow to South Australia (GL)**

\* Flow to SA will be greater than normal entitlement for this month due to the delivery of additional environmental water.

Entitlement this month	135.0 *
Flow this week	45.2
Flow so far this month	96.2
Flow last month	249.0

(6 500 ML/day)

**Salinity (EC) (microSiemens/cm at 25° C)**

	Current	Average over the last week	Average since 1 August 2014
Swan Hill	60	60	90
Euston	100	100	100
Red Cliffs	110	100	120
Merbein	100	100	120
Burtundy (Darling)	890	900	810
Lock 9	110	110	130
Lake Victoria	160	220	210
Berri	230	240	220
Waikerie	300	290	280
Morgan	280	280	280
Mannum	300	290	330
Murray Bridge	320	310	360
Milang (Lake Alex.)	810	810	780
Poltalloch (Lake Alex.)	570	700	620
Meningie (Lake Alb.)	2 450	2 440	2 420
Goolwa Barrages	1 800	2 450	1 320



**River Levels and Flows**

**Week ending Wednesday 15 Apr 2015**

River Murray	Minor Flood Stage (m)	Gauge	Height	Flow (ML/day)	Trend	Average Flow this Week (ML/day)	Average Flow last Week (ML/day)
		local (m)	(m AHD)				
Khancoban	-	-	-	7 210	F	6 710	2 010
Jingellic	4.0	2.05	208.57	7 050	F	6 340	2 620
Tallandoon ( Mitta Mitta River )	4.2	2.80	219.69	6 010	S	5 970	3 790
Heywoods	5.5	3.16	156.79	14 450	F	14 990	15 600
Doctors Point	5.5	2.97	151.44	14 410	F	15 320	15 810
Albury	4.3	2.01	149.45	-	-	-	-
Corowa	4.6	3.26	129.28	15 960	R	14 800	16 460
Yarrowonga Weir (d/s)	6.4	1.58	116.62	9 520	F	9 840	9 890
Tocumwal	6.4	2.23	106.07	9 820	R	9 860	10 110
Torrumbarry Weir (d/s)	7.3	2.22	80.77	6 420	F	6 680	6 310
Swan Hill	4.5	1.29	64.21	6 680	S	6 440	5 960
Wakool Junction	8.8	3.14	52.26	8 510	R	8 180	7 890
Euston Weir (d/s)	9.1	1.79	43.63	9 500	S	9 140	8 700
Mildura Weir (d/s)	-	-	-	8 930	F	8 550	7 760
Wentworth Weir (d/s)	7.3	3.00	27.76	9 000	F	8 750	7 900
Rufus Junction	-	3.42	20.35	6 050	R	5 660	5 560
Blanchetown (Lock 1 d/s)	-	0.59	-	5 120	F	4 920	4 260
<b>Tributaries</b>							
Kiewa at Bandiana	2.8	0.71	153.94	170	R	180	170
Ovens at Wangaratta	11.9	7.76	145.44	210	S	250	220
Goulburn at McCoys Bridge	9.0	1.52	92.94	1 000	S	1 030	1 440
Edward at Stevens Weir (d/s)	5.5	2.37	82.14	2 580	S	2 600	2 090
Edward at Liewah	-	2.60	57.98	2 030	F	2 090	2 190
Wakool at Stoney Crossing	-	1.41	54.90	410	S	430	390
Murrumbidgee at Balranald	5.0	1.44	57.40	1 050	F	1 210	1 260
Barwon at Mungindi	6.1	3.64	-	1 230	R	1 050	190
Darling at Bourke	9.0	3.89	-	0	F	0	10
Darling at Burtundy Rocks	-	0.68	-	70	R	30	0

Natural Inflow to Hume	450	570
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(i.e. Pre Dartmouth & Snowy Mountains scheme)

**Weirs and Locks** Pool levels above or below Full Supply Level (FSL)

Murray	FSL (m AHD)	u/s	d/s		FSL (m AHD)	u/s	d/s
Yarrowonga	124.90	-0.16	-	No. 7 Rufus River	22.10	+0.04	+1.14
No. 26 Torrumbarry	86.05	+0.00	-	No. 6 Murtho	19.25	+0.07	+0.12
No. 15 Euston	47.60	-0.16	-	No. 5 Renmark	16.30	+0.05	+0.24
No. 11 Mildura	34.40	+0.02	+0.25	No. 4 Bookpurnong	13.20	+0.08	+0.75
No. 10 Wentworth	30.80	+0.05	+0.36	No. 3 Overland Corner	9.80	+0.05	+0.22
No. 9 Kulnine	27.40	-0.01	-0.60	No. 2 Waikerie	6.10	+0.05	+0.11
No. 8 Wangumma	24.60	-0.74	+0.22	No. 1 Blanchetown	3.20	-0.05	-0.16

**Lower Lakes** FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD)	0.55
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**Barrages**

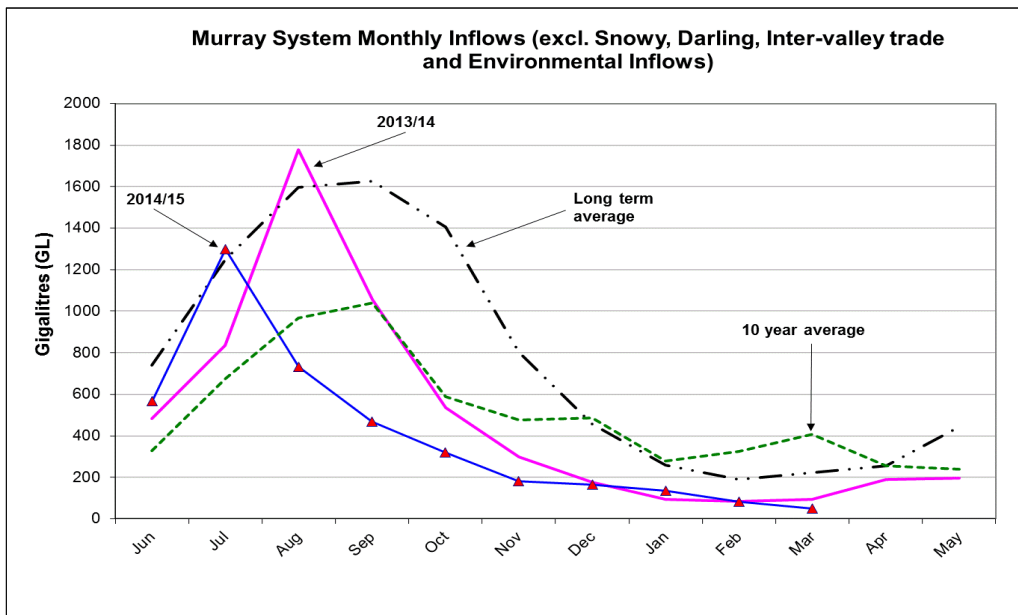
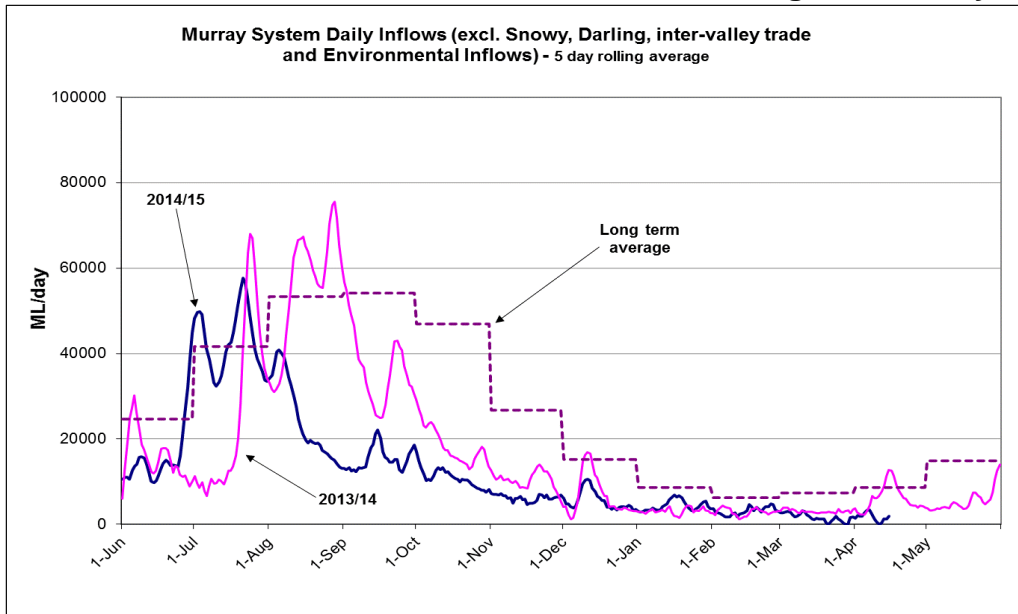
**Fishways at Barrages**

	Openings	Level (m AHD)	No. Open	Rock Ramp	Vertical Slot
Goolwa	128 openings	0.53	4	-	Open
Mundoo	26 openings	0.52	All closed	-	-
Boundary Creek	6 openings	-	0.1	-	-
Ewe Island	111 gates	-	All closed	-	-
Tauwichee	322 gates	0.53	8	Open	Open

AHD = Level relative to Australian Height Datum, i.e. height above sea level



Week ending Wednesday 15 Apr 2015



State Allocations (as at 15 Apr 2015)

NSW - Murray Valley

High security	97%
General security	61%

Victorian - Murray Valley

High reliability	100%
Low reliability	0%

NSW - Murrumbidgee Valley

High security	95%
General security	53%

Victorian - Goulburn Valley

High reliability	100%
Low reliability	0%

NSW - Lower Darling

High security	100%
General security	100%

South Australia - Murray Valley

High security	100%
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NSW : <http://www.water.nsw.gov.au/Water-management/Water-availability/Water-allocations/Water-allocations-summary/water-allocations-summary/default.aspx>

VIC : <http://www.nvrn.net.au/allocations/current.aspx>

SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>

# Flow advice



16 April 2015

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## Keep track of Mitta flows on MDBA website

Landholders and river users on the Mitta Mitta are encouraged to stay informed of varying river heights and flows from Dartmouth Dam during autumn by checking the MDBA website at [www.mdba.gov.au](http://www.mdba.gov.au)

Information on [current flows and forecasts](#) are regularly updated on the website and summary information is available in the MDBA's [weekly report](#).

Starting this weekend, the volume of water released from Dartmouth Dam will be gradually reduced over two weeks, from 6000 megalitres per day on Saturday 18 April to 600 megalitres per day on Sunday 3 May, allowing for routine maintenance at Dartmouth.

Flows during the rest of autumn will depend on weather conditions and operational requirements.

The current storage volume in Dartmouth Reservoir is 2932 gigalitres (76 per cent capacity) while Hume Reservoir's storage is 616 gigalitres (20 per cent capacity).

The Bureau of Meteorology now advises there is at least a 70 per cent chance of an El Niño event in 2015. This does not automatically mean dry conditions but it increases the likelihood of lower winter-spring rainfall in south east Australia.

Under dry conditions, bulk transfers of water in the Mitta Mitta River could begin as early as winter and continue well into the 2015—16 water year.

ENDS

For more information, contact the MDBA Media office at [media@mdba.gov.au](mailto:media@mdba.gov.au) or 02 6279 0141

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16 April 2015

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## Lake Mulwala could begin lowering as early as next week

Communities around Lake Mulwala are advised that the MDBA could begin lowering the lake as early as next week, in preparation for structural works at Yarrawonga weir and to manage the aquatic weed *Egeria densa*.

Lake users, including pumpers, boat operators and recreational users, should consider adjusting their activities for changed water levels over the next three months.

MDBA head of River Management David Dreverman said the lake level will be reduced, as early as next week, at a gradual rate to ensure water can still be delivered to the major irrigation offtakes until the season ends on 15 May.

“Once the irrigation season finishes, the lake will be drawn down to 3.5 metres below the normal operating level (121.2 metres Australian Height Datum) by around 1 June 2015,” Mr Dreverman said.

“The lake will remain at this level until about mid-July, and depending on inflows from the Ovens and Kiewa rivers, is expected to return to its normal operating height around late July, ready for the start of the irrigation season.

“We are very aware of the importance of Lake Mulwala to the local community, so we’ve been talking with people in the area to limit any disruption to local activities.”

Structural works at the weir include routine testing of anchors and erosion control on the lake foreshore.

“A survey of the aquatic weed *Egeria densa* in March found that the weed would be completely exposed by lowering the lake by 3.5 metres. This will help stop it spreading to the extent that caused problems in 2009.”

Several NSW government agency policies continue to apply during the drawdown. Lake users are advised to consult NSW Department of Primary Industries and Roads and Maritime Services information for fishing and boating advice.

More information on the progress of the drawdown will be updated in future editions of the MDBA’s River Operations Weekly Report on the MDBA website at [www.mdba.gov.au/river-data/current-information-forecasts](http://www.mdba.gov.au/river-data/current-information-forecasts)

ENDS

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